Louisiana Department of Environmental Quality (LDEQ) Office of Environmental Services

STATEMENT OF BASIS

Targa Midstream Services LP
Targa Midstream Services Limited Partnership - Venice Gas Processing Plant
Venice, Plaquemines Parish, Louisiana
Agency Interest Number: 17897
Activity Number: PER20060007
Proposed Permit Number: 2240-00015-V2

I. APPLICANT

Company:

Targa Midstream Services Limited Partnership - Venice Gas Processing Plant 1000 Louisiana Street, Suite 4300 Houston, Texas 77002

Facility:

Targa Midstream Services Limited Partnership – Venice Gas Processing Plant 1565 Tidewater Rd., Venice, Plaquemines Parish, Louisiana Approximate UTM coordinates are 267.52 kilometers East and 3235.14 kilometers North, Zone 16

II. FACILITY AND CURRENT PERMIT STATUS

In operation since the early 1960s, the Targa Midstream Services Limited Partnership - Venice Gas Processing Plant is an existing natural gas processing facility that is located approximately 5 miles from the Gulf of Mexico along Pass Tanta Phine and Red Pass of the Mississippi River Delta System near Venice, Louisiana in Plaquemines Parish. The operator of the facility, which is the responsible party for regulatory purposes, changed from Warren Petroleum Company, L.P. to Dynegy Midstream Services, L.P. effective July 6, 1998, and then to Targa Midstream Services, L.P. (Targa) effective October 31, 2005. The facility is also comprised of the Koch Venice Cryogenic Plant which is now under the ownership of Venice Energy Services Company and operated by Targa.

The Targa Midstream Services Limited Partnership - Venice Gas Processing Plant, which receives natural gas via pipeline, is a nominal 750 MM scf/day natural gas processing facility. Natural gas liquids (NGL) are recovered from incoming natural gas and are then fractionated into an ethane-propane mix, propane, normal butane, iso-butane, and natural gasoline. Residue gas (consisting principally of methane) from the facility is delivered to pipeline. Products from the facility are delivered by pipeline and barge. Air emission sources include turbine engines; steam generation boilers; storage tanks; a process flare; generator, pump and compressor engines; and equipment fugitives.

The Targa Midstream Services Limited Partnership - Venice Gas Processing Plant consists of two (2), parallel cryogenic processing trains: Cryo Plant I (formerly Koch Cryogenic Plant) and the proposed Cryo Plant II. Cryo Plant I was built in 1997 and is rated at a nominal inlet capacity of 300 MM scf/day. Residue gas from Cryo Plant I is compressed using a General Electric Frame V natural gas-fired turbine engine driving the centrifugal compressor. Combustion emissions from the Cryo Plant I turbine are controlled using steam injection.

Cryo Plant II will have a rated, nominal inlet capacity of 450 MM scf/day. Residue gas from Cryo Plant II will be compressed using a General Electric LM-2500 GB natural gas-fired turbine engine driving the centrifugal compressor. Combustion emissions from the Cryo Plant II turbine will be controlled using water injection.

The two (2) cryogenic plants share a common utility system for electrical power, treated water, steam generation, and flare.

Targa Midstream Services Limited Partnership - Venice Gas Processing Plant is a designated Part 70 source. Several Part 70 permits have been issued to the operating units within the gas plant. These include:

Permit No.	Unit or Source	Date Issued
2240-00015-V0	Venice Gas Processing Plant	December 30, 1997
2477-V0	Koch Cryogenic Plant	July 24,1997
2884-V0	Steam Boiler B-1100-K	February 18, 2004
2240-00015-V1	Targa Midstream Services Limited Partnership - Venice Gas Processing Plant	March 3, 2006

In addition, PSD Permit PSD-LA-612 (July 24, 1997) was also issued to the Koch Cryogenic Plant.

I. PROPOSED PROJECT/PERMIT INFORMATION

Application

A permit application was submitted on December 18, 2006 requesting modification of a Part 70 operating permit for the Targa Midstream Services Limited Partnership - Venice Gas Processing Plant. Additional information dated January 12, 2007, January 22, 2007, February 8, 2007, February 13, 2007, and February 22, 2007, was also submitted.

Project

With this modification, Targa proposes to authorize the Cryo Plant II construction project. The purpose of the Cryo Plant II construction project is to add a 26,500 brake horsepower natural gas-fired turbine engine (EQT046), a 40 MM BTU/hr natural gas-fired boiler (EQT045), a 2,518 horsepower diesel-fired emergency generator, and a 1000-gallon diesel storage tank as well as update fugitive equipment leak emissions (FUG003) as a result of the additional Cryo Plant II operations. The new equipment associated with the Cryo Plant II construction project is to replace the equipment associated with the existing Lean Oil absorption operation which was heavily damaged by Hurricane Katrina in 2005. In addition, the TEG dehydration unit, which is associated with the facility's fractionation process, is being shut down as a result of hurricane damage. Overall, emissions from the facility will be significantly reduced as a result of the project since Targa proposes to remove the following emission points:

- EOT002 Process Heater F-401B
- EQT003 Process Heater F-401C
- EOT005 Steam Boiler B-1100-B
- EQT006 Steam Boiler B-1100-D
- EQT007 Steam Boiler B-1100-F
- Emission Point No. 97 Steam Boiler B-1100-J
- EOT010 Condensate/Lean Oil Tank S-302A
- EOT011 Condensate/Lean Oil Tank S-302B
- EOT012 Condensate/Lean Oil Tank S-303A
- EOT013 Condensate/Lean Oil Tank S-303B
- EQT025 TEG Dehydrator Vent
- EQT030 Waste Heat Boiler
- EQT038 Condensate Tank (VSP)
- EQT040 EG Dehydrator Vent

Proposed Permit

Permit 2240-00015-V2 will be the modification of Part 70 operating permit 2240-00015-V1 for the Targa Midstream Services Limited Partnership - Venice Gas Processing Plant.

Permitted Air Emissions

Estimated emissions in tons per year are as follows:

<u>Pollutant</u>	<u>Before</u>	<u>After</u>	<u>Change</u>
PM_{10}	38.09	29.96	- 8.13
SO ₂	6.89	11.04	+ 4.15
NO_X	778.59	665.95	- 112.64
CO	683.99	564.05	- 119.94
VOC *	357.58	159.30	- 198.28

*VOC LAC 33:III.Chapter 51 Toxic Air Pollutants (TAPs):

Pollutant	Before	After	Change
Benzene	0.698	0.487	- 0.211
Ethyl benzene	0.049	0.023	- 0.026
Formaldehyde	3.110	3.761	+ 0.651
n-Hexane	6.968	8.101	+ 1.133
Methanol	0.261	0.261	
Toluene	0.329	0.204	- 0.125
Xylenes	0.145	0.075	- 0.070
Total	11.560	12.912	+ 1.352

Other VOC (TPY):

146.388

REGULATORY ANALYSIS

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.

Applicability and Exemptions of Selected Subject Items

ID No:	Requirement	Notes	
EQT 4 14- Steam Boiler B- 1100-A EQT 8	NSPS Subpart D – Standards of Performance for Fossil-Fuel-Fired Steam Generators. [40 CFR 60.40b]	DOES NOT APPLY. Boilers were constructed prior to August 17, 1971, and have heat input rates < 250 MM BTU/hr.	
20- Steam Boiler B- 1100-G	NSPS Subpart Db — Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. [40 CFR 60.40b]	DOES NOT APPLY. Boilers were constructed prior to 1984.	
	NSPS Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. [40 CFR 60.40c]	DOES NOT APPLY. Boilers were constructed prior to 1989.	
EQT 31 80 - Solar Saturn Turbine No. 1	NSPS Subpart GG – Standards of Performance for Stationary Gas Turbines [40 CFR 60.330]	DOES NOT APPLY. Turbines have a heat input less than 10 MM BTU/hr.	
EQT 32 81 - Solar Saturn Turbine No. 2 EQT 33 82 - Solar Saturn Turbine No. 3	NSPS Subpart KKKK – Standards of Performance for Stationary Combustion Turbines [40 CFR 60.4305]		
EQT 29 58 – Centaur, T-5700 Turbine	NSPS Subpart KKKK – Standards of Performance for Stationary Combustion Turbines [40 CFR 60.4305]	DOES NOT APPLY. Turbine was constructed prior to February 18, 2005 and has not been modified or reconstructed.	
EQT 41 100 – GE Frame 5 Turbine	NSPS Subpart GG - Standards of Performance for Stationary Gas Turbines [40 CFR 60.330]		
	NSPS Subpart KKKK – Standards of Performance for Stationary Combustion Turbines [40 CFR 60.4305]	reconstructed.	
EQT46 Cryo 2 LM 2500 Turbine	NSPS Subpart GG — Standards of Performance for Stationary Gas Turbines [40 CFR 60.330]	DOES NOT APPLY. Turbine must comply with 40 CFR 60 Subpart KKKK.	

ID No:	Requirement	Notes
EQT 14 28-Open Roof Wastewater Tank EQT 17 44-Lean Oil Tank (Fixed Roof) EQT 43 Diesel Storage Tank	LAC 33:III.Chapter 21 - Control of Emission of Organic Compounds. [LAC 33:III.2103]	
EQT 14 28-Open Roof Wastewater Tank EQT 15 33-Condensate/Lean Oil Tank	NSPS Subpart K – Standards of Performance for Storage Vessels for Which Construction, Reconstruction, or Modification Commences after June 11, 1973 and Prior to May 19, 1978. [40 CFR 60.110]	DOES NOT APPLY. Storage tanks were constructed prior to June 11, 1973.
EQT 16 43-Gasoline Storage Tank EQT 17 44-Lean Oil Tank EQT 18 45 – Methanol Tank No.	NSPS Subpart Ka — Standards of Performance for Storage Vessels for Petroleum liquids for Which Construction, Reconstruction, or Modification Commences after May 18, 1978 and Prior to July 23, 1984. [40 CFR 60.110a]	were constructed prior to May 18,
EQT 19 46 – Methanol Tank No. 2 EQT 28 56-API Sump EQT 36 90- Condensate/Produced Water Tank EQT 37 91-Condensate Tank	NSPS Subpart Kb — Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984. [40 CFR 60.110b]	were constructed prior to July 23,

ID No:	Requirement	Notes
EQT 4 14-Steam Boiler B- 1100-A	LAC 33:III.1503 – Emission Limitations	EXEMPT. Units emit less than 100 tons of SO ₂ per year. [LAC 33:III.1503.C and 1511.A]
EQT 8 20-Steam Boiler B- 1100-G	LAC 33:III.1511 – Continuous Emissions Monitoring	
EQT 9 21- Process Flare		
EQT 20 48- Plant Firewater Pump		
EQT 21 50- Joy Air Compressor		
EQT 22		
51- Sullair Compressor		
EQT 23		
53- Emergency Generator No. 2		
EQT 24		
54- Sullair Diesel Compressor		
EQT 29		
58- Centaur, T-5700 Turbine		
EQT 31		
80- Solar Saturn Turbine No.1		
EQT 32		
81- Solar Saturn Turbine No.2		
EQT 33		
82- Solar Saturn Turbine No.3		

ID No:	Requirement	Notes
EQT 34 84- Reciprocating Compressor EQT 35 85- Generator EQT 41 100-GE Frame 5 Turbine (VCP) EQT 42 103- Steam Boiler B- 1100-K EQT 44 Diesel-fired Emergency Generator EQT 45 Natural Gas-fire Boiler EQT 46 Cyro 2 LM 2500 Turbine	LAC 33:III.1503 – Emission Limitations LAC 33:III.1511 – Continuous Emissions Monitoring	EXEMPT. Units emit less than 100 tons of SO ₂ per year. [LAC 33:III.1503.C and 1511.A]
EQT 36 90-Condensate/Produce Water Tank EQT 37 91-Condensate Tank	LAC 33:III.Chapter 21 - Control of Emission of Organic Compounds. [LAC 33:III.2103]	EXEMPT. Tanks store condensate prior to lease custody transfer. [LAC 33:III.2103.G.2]
EQT 43 Diesel Storage Tank	NSPS Subpart Kb — Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984. [40 CFR 60.110b]	DOES NOT APPLY. Storage tanks has a capacity less than 75 m ³ .

ID No:	Requirement	Notes
EQT 21 50- Joy Air Compressor EQT 22 51- Sullair Compressor EQT 23	NSPS Supbart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. [40 CFR 60.4200]	
53- Emergency Generator No. 2		
EQT 24 54- Sullair Diesel Compressor		
EQT 34		j
84- Reciprocating Compressor EQT 44 Diesel-fired Emergency Generator		
FUG 2 95- Fugitive Emissions (VSP)	NSPS Supbart KKK – Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants. [40 CFR 60.630]	constructed prior to January 20, 1984,

Prevention of Significant Deterioration/Nonattainment Review

The potential increase in NO_X and CO emissions from affected sources (without respect to decreases) was above their significance levels; therefore, a PSD netting analysis was required. The net contemporaneous increase in both NO_X and CO emissions (as evaluated on an actual to allowable basis using 2003 through 2004 actual emissions) was less than the significance level of 40 TPY for NO_X and 100 TPY for CO; therefore, PSD review was not required. Reduction of NO_X and CO emissions was obtained by the proposed removal of the aforementioned process heaters, steam boilers, and waste heat boiler as emission sources.

Streamlined Equipment Leak Monitoring Program

It is required that the Targa Midstream Services Limited Partnership - Venice Gas Processing Plant comply with a streamlined equipment leak monitoring program. Compliance with the streamlined program shall serve to comply with each of the fugitive emission monitoring programs being streamlined.

For the Targa Midstream Services Limited Partnership - Venice Gas Processing Plant, fugitive emissions are subject to the requirements of 40 CFR 60 Subpart KKK, LAC 33:III.2121, and LAC 33:III.5109. Among these regulations, 40 CFR 60 Subpart KKK is the overall most stringent program. Therefore, fugitive emissions shall be monitored as required by this program (40 CFR 60 Subpart KKK).

Unit or Plant Site	Program Being Streamlined	Stream Applicability	Overall Most Stringent Program
Targa Midstream Services Limited	40 CFR 60 Subparts KKK – NSPS for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants	≥ 10% VOC	40 CFR 60 Subparts KKK – NSPS for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants
Partnership - Venice Gas Processing Plant	LAC 33:III.2121 – Fugitive Emission Control for Ozone Nonattainment Areas and Specified Parish	≥ 10% VOC	
	LAC 33:III.5109 – Louisiana MACT Determination for Non-HON Sources	≥ 5% VOTAP	

MACT Requirements

This facility has previously been a major source of toxic air pollutants (TAPs) pursuant to LAC 33:III.Chapter 51. According to LAC 33:III.5101.A, the provisions of LAC 33:III.5105.A, 5107.A, B, & C, 5111.A.4, and 5113 apply. As required by LAC 33:III.905, the controls to meet Maximum Achievable Control Technology must be maintained. NESHAP regulations do not apply.

Air Quality Analysis

No dispersion modeling was performed.

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the proposed permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the proposed permit.

PERMIT SHIELD

There is no permit shield.

I. PERIODIC MONITORING

Facility-wide Monitoring requirements

Permittee shall monitor TAPs in accordance with LAC 33:III.5113.C.

All sources subject to NSPS and required to implement Continuous Monitoring Systems (CMS) shall do so in accordance with 40 CFR 60.13.

Permittee shall monitor, if requested, for odor intensity and take and transport samples in a manner which minimizes alteration of the samples either by contamination or loss of material. Evaluate all samples as soon after collection as possible in accordance with the procedures set forth in LAC 33:III.2901.G

Boiler Monitoring Requirements

Permittee shall demonstrate compliance with the emission limits of this permit by performing a stack test at Emission Points EQT004 and EQT008. Due within 180 days after initial startup (or restart-up after modification), or within 60 days after achieving normal production rate or end of the shakedown period, whichever is earliest. Test methods and procedures shall be in accordance with New Source Performance Standards, 40 CFR 60, Appendix A, Method 7E - Determination of Nitrogen Oxides Emissions from Stationary Sources, and Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources. Use alternate stack test methods only with the prior approval of the Office of Environmental Assessment, Environmental Technology Division, Engineering Services. As required by LAC 33:III.913, the permittee will provide necessary sampling ports in stacks or ducts and such other safe and proper sampling and testing facilities for proper determination of the emission limits.

Permittee shall notify the Office of Environmental Assessment, Environmental Technology Division, Engineering Services, at least 30 days prior to the performance/emissions test to provide the opportunity to conduct a pretest meeting and observe the emission testing.

A report of the emissions test results shall be submitted within 60 days to the Office of Environmental Assessment, Environmental Technology Division, Engineering Services, after the performance/emissions test has been conducted.

Flare Monitoring Requirements

Permittee shall monitor system, Emission Point EQT009, in accordance with 40 CFR 60.18.

A corrective action plan for re-lighting the flare shall be developed and kept readily available for immediate implementation in the event the flare needs to be relighted.

External Floating Roof Storage Tank Monitoring Requirements

Emission Point EQT015 shall conduct the following monitoring:

- 1. Semiannual visual inspection/determination of secondary seals or closure mechanisms.
- 2. Annually monitoring by measurement of secondary seal gap area & width at any tank level, provided the roof is off its legs.
- 3. Once every five years monitoring by measurement of primary seal gap area & width at any tank level, provided the roof is off its legs.

Conditions determined by monitoring not up to standards as specified in LAC 33.III.2103.D.2 shall be reported in accordance with LAC 33:III.2103.D.2.e.

NSPS Gas Turbine Monitoring Requirements

Permittee shall monitor system, Emission Point EQT029, according to 40 CFR 60.334 - Monitoring of operations.

Permittee shall monitor system, Emission Point EQT046, according to 40 CFR 60.4335 - Monitoring.

In addition, permittee shall demonstrate compliance with the emission limits of this permit by performing a stack test at Emission Points EQT029, EQT041, and EQT046. Due within 180 days after initial startup (or restart-up after modification), or within 60 days after achieving normal production rate or end of the shakedown period, whichever is earliest. Test methods and procedures shall be in accordance with New Source Performance Standards, 40 CFR 60, Appendix A, Method 7E - Determination of Nitrogen Oxides Emissions from Stationary Sources and Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources. Use alternate stack test methods only with the prior approval of the Office of Environmental Assessment, Environmental Technology Division, Engineering Services. As required by LAC 33:III.913, provide necessary sampling ports in stacks or ducts and such other safe and proper sampling and testing facilities for proper determination of the emission limits

Permittee shall notify the Office of Environmental Assessment, Environmental Technology Division, Engineering Services, at least 30 days prior to the performance/emissions test to provide the opportunity to conduct a pretest meeting and observe the emission testing.

A report of the emissions test results shall be submitted within 60 days to the Office of Environmental Assessment, Environmental Technology Division, Engineering Services, after the performance/emissions test has been conducted.

PSD Gas Turbine Monitoring Requirements

Permittee shall demonstrate compliance with the emission limits of this permit by performing a stack test at Emission Points EQT041. Due within 180 days after initial startup (or restart-up after modification), or within 60 days after achieving normal production rate or end of the shakedown period, whichever is earliest. Test methods and procedures shall be in accordance with New Source Performance Standards, 40 CFR 60, Appendix A, Method 20 - Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines, and Method 10 - Determination

of Carbon Monoxide Emissions from Stationary Sources. Use alternate stack test methods only with the prior approval of the Office of Environmental Assessment, Environmental Technology Division, Engineering Services. As required by LAC 33:III.913, provide necessary sampling ports in stacks or ducts and such other safe and proper sampling and testing facilities for proper determination of the emission limits

Permittee shall notify the Office of Environmental Assessment, Environmental Technology Division, Engineering Services, at least 30 days prior to the performance/emissions test to provide the opportunity to conduct a pretest meeting and observe the emission testing.

A report of the emissions test results shall be submitted within 60 days to the Office of Environmental Assessment, Environmental Technology Division, Engineering Services, after the performance/emissions test has been conducted.

Compliance Assurance Monitoring

Federal regulation 40 CFR 64 – Compliance Assurance Monitoring is not applicable to this facility.

II. GLOSSARY

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

Hydrogen Sulfide (H_2S) – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

New Source Review (NSR) – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

Nitrogen Oxides (NO_X) – Compounds whose molecules consist of nitrogen and oxygen.

Organic Compound – Any compound of carbon and another element. Examples: Methane (CH_4), Ethane (C_2H_6), Carbon Disulfide (CS_2)

Part 70 Operating Permit – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total

toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

 PM_{10} – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO₂) - An oxide of sulfur.

Sulfuric Acid (H_2SO_4) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.